



**THE PORT AUTHORITY  
OF NY & NJ**

*Peter L. Shewey*  
ENGINEERING PROGRAM MANAGER  
WORLD TRADE CENTER  
CHIEF ARCHITECT

Engineering Department  
Design Division

**The World Trade  
Center  
Electrical/HVAC  
Upgrade Program**

Title  
**TOWERS ONE AND TWO  
LOW VOLTAGE SUBSTATIONS  
CONSTRUCTION AND  
INSTALLATION**

**ARCHITECTURAL  
SUBSTATION - SS 75N  
TOWER ONE  
ROUTING PLAN**

No. Date Revision Approved

This drawing subject to conditions in contract.  
All inventions, ideas, designs and methods  
herein are reserved to Port Authority and may not  
be used without its written consent.

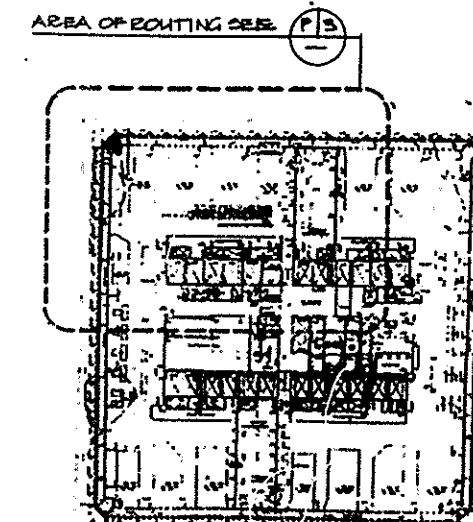
Designed by *[Signature]*  
Drawing Number *[Signature]*  
Date 5/1/85

Contract Number  
Drawing Number

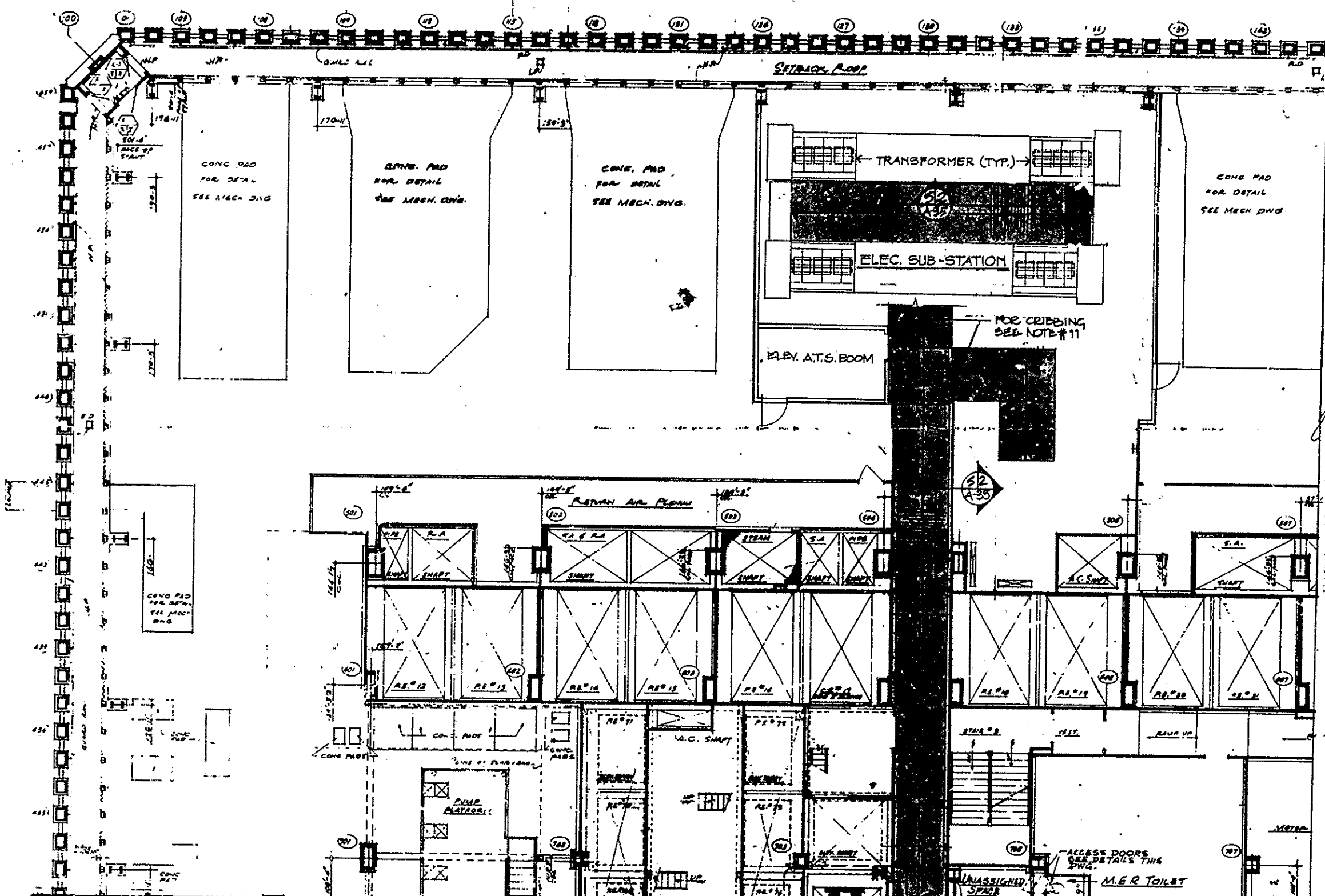
WTC-802071 A-23

**ROUTING AND CRIBBING NOTES:**

1. THE LOCATION OF THE ELECTRICAL EQUIPMENT ON THE FLOORS SHALL NOT BE CHANGED WITHOUT THE APPROVAL OF THE ENGINEER.
2. ALL ELECTRICAL EQUIPMENT SHALL BE MOVED FROM THE TRUCK TO THE ELEVATOR AND TO THEIR FINAL PLACEMENT LOCATION ON THE FLOORS ON WHEELED CARRIAGES MOVING IN A CONTINUOUS NON-SLIP MANNER VIA THE DESIGNATED ROUTE (SHOWN SHADED ON PLANS).  
CRIBBING AS DETAILED ON THE CONTRACT DRAWINGS SHALL BE PLACED ON THE ROUTE SLAB AND THE EQUIPMENT CARRIAGE SHALL BE ROLLED ON IT. THE EQUIPMENT SHALL BE LIFTED DIRECTLY FROM THE CARRIAGE TO THE SUPPORT FRAMES ON PADS IN THE FINAL LOCATION WITHOUT PLACING IT AT ANY OTHER LOCATION ON THE FLOOR.
3. NO AREA WITHIN THE WORLD TRADE CENTER SUB GRADE LEVEL OR ON THE FLOORS SHALL BE USED FOR THE PURPOSE OF EQUIPMENT STORAGE WITHOUT THE APPROVAL OF THE ENGINEER.
4. A FORKLIFT SHALL NOT BE USED WITHOUT PRIOR APPROVAL OF THE ENGINEER.
5. THE CARRIAGE DETAIL WITH NUMBER AND GAUGE OF WHEELS SHALL BE SUBMITTED FOR APPROVAL.
6. CRIBBING SHALL BE REQUIRED ON ALL FLOOR SLABS FOR MOVING TRANSFORMERS AND ANY OTHER EQUIPMENT WEIGHING MORE THAN 3,500 LBS.
7. CRIBBING REQUIRED FOR TRANSFER OF TRANSFORMER SHALL BE COORDINATED WITH MANUFACTURER. CONTRACTOR SHALL COMPLY WITH MANUFACTURER'S REQUIREMENTS BEFORE MOVING ANY TRANSFORMER EQUIPMENT.
8. FOR INFORMATION RELATING TO THE LOCATION AND ARRANGEMENT OF TRANSFORMERS, TRANSFORMER BASES AND ALL OTHER ELECTRICAL EQUIPMENT AT SUBSTATION ROOM, SEE ELECTRICAL DRAWINGS.
9. THE CONTRACTOR SHALL USE A CRANE MAT OR OTHER ALTERNATE METHOD FOR CRIBBING OVER SLAB WITH THE APPROVAL OF THE ENGINEER.
10. TIMBER CONSTRUCTION: (SEE NOTES #1 ON DWG. A-1)  
A. ALL LUMBER DIMENSIONS SHOWN ARE NOMINAL.  
B. ALL LUMBER SHALL BE "DOUGLAS FIR SOUTH" OR APPROVED EQUAL:  
18" X 4" BEAMS - SELECT STRUCTURAL WITH MIN. Fb = 1700 PSI, E = 1400 PSI, 4" BLOCKING-GRADE NO.1  
C. FOR ADDITIONAL INFORMATION AND REQUIREMENTS, SEE SPEC. 06100.
11. CRIBBING INSIDE THE SUBSTATIONS SHALL BE CONTINUOUS AS REQUIRED AND SHALL BE COORDINATED WITH THE MANUFACTURER AS SHOWN ON NOTE #7



**KEY PLAN**



**P3 ROUTING PLAN**

SCALE IN FEET  
0 5 10

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF ONE OF THE CONTRACT DRAWINGS CONSTITUTING A PART OF CONTRACT NO. WTC-802071 IN THE FORA IN WHICH SAID DRAWINGS EXISTED AT THE TIME THE SAID CONTRACT WAS EXECUTED BY THE PARTIES.  
DATE 6/21/95 *Sultan A. Aslam*  
SPEC. WRITER  
DATE 8/15/95 *Peter L. Shewey*  
ENGINEER OF DESIGN